

## Production of an Innovative Tool for the active search of women as a factor of effectiveness in the screening for Cervical Neoplasms: Experience Report

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**Abstract**— Objective: to report on the experience of developing an innovative tool that facilitated the process of actively seeking women as an efficacy factor in the screening for cervical neoplasms. Method: it is a descriptive study, type of experience report, carried out by nursing and medical students from Public and Private Higher Education Institutions in the city of Belém do Pará / Brazil on the experience of building a facilitating tool aimed at preventing cervical cancer. Thus, for the elaboration of the innovative active search tool, three moments were necessary: I- Data collection, II- Operative plan and III - Construction of the tool, in addition

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**Keywords—** Uterine Cervical Neoplasms, Papanicolaou Test, Disease Prevention, Innovation, Women's Health.

to the applicability of technology in women's health care. Results: It was noticed that with the elaboration of innovative technology, the old tool, the record book, is outdated, due to the fact that it offers a discontinuity of care to women who undergo the exam. In addition, the development of this new tool allowed the clarity and agility of monitoring each woman, it allowed to quantify the number of women who take the exam and to know the reasons for not taking the exam. Conclusion: The study showed that with organization and dedication, it is possible that the greatest number of women undergo cytopathological examination of the uterine cervix, as an effective method of prevention and early detection of CC. It is worth mentioning the importance of disease prevention actions through innovative technologies that facilitate health care and, thus, promote continuous and holistic care.

## I. INTRODUCTION

Cancer is characterized by the abnormal growth of cells that have the ability to spread between tissues. Thus, this pathology can occur in more than a hundred different types of cells, dividing quickly and, as a result, becoming very aggressive and uncontrollable, determining the formation of tumors, which can spread to other areas of the body, characterizing metastases (SILVA, FCF, et al, 2020).

In Brazil, cervical cancer (CC) is the second most prevalent neoplasia among the female public, behind breast cancer, responsible for a high annual morbidity and mortality rate. In this sense, the CC is characterized as a public health problem with high rates of morbidity and mortality although the pathology is curable and the health system offers prevention and early detection actions. (Melo, EMF, et al, 2019).

The development of CC causes serious injuries in an interval that varies from 10 to 20 years, and therapy, despite technological advances, is more effective in the initial stages. According to the World Health Organization (WHO), if preventive measures for its control are not taken, cancer will gain the first place in mortality, preferably in developing countries (NAKAGAWA, JTT, Schirmer, J & Barbieri, M, 2010).

Among the types of cancer that exist, CC has one of the highest potentials for cure and prevention when diagnosed in the primary stage of the disease. Thus, the high capacity for prevention and cure is explained by the time-consuming progress of the pathology, with well-determined phases and the facility to identify changes early, providing rapid diagnosis and effective therapy. (Melo, EMF, et al, 2019).

According to the WHO, some chronic infections are risk factors for the development of types of cancer. Thus, a World Health Organization indicates that about 15% of cervical cancers diagnosed between 2010 and 2015 were

the result of infections caused by different types of human papillomavirus (HPV). Thus, infection caused by the HPV virus is often related to cervical cancer, although an HPV infection alone is not necessary to develop this type of cancer (Rodríguez, G, et al, 2019).

In this context, comparing these data with the incidence of approximately 500,000 cases of cervical cancer each year, it can be concluded that, even with HPV infection, cancer is a rare outcome. Therefore, HPV infection is a necessary but not sufficient factor for the development of CC. Thus, there are some cofactors that increase the risk of genital cancer in women infected with papillomavirus: high number of pregnancies, use of oral contraceptives, smoking, HIV infection and other sexually transmitted diseases (such as herpes and chlamydia). Tumor progression caused by normal infection of human papillomavirus cells appears to be regulated by factors related to the virus (type of virus) and factors related to the host (smoking, oral contraceptives, multiparity and immunosuppression) (Carvalho, KF, Costa, LMO & França, RF, 2019).

Thus, the early discovery of the neoplasia and its precursor lesions occurs through the Pap smear, which is a gynecological test of cervical cytology performed to identify changes and precursor lesions of the pathology, as a way of early detection of cancer. An easy, clear, efficient and low-cost test provides tracking of up to 80% of CC cases. The test should be performed on women with an active sexual life, with priority given to those aged between 25 and 64 years, determined as the target population, these ages being explained by the greater number of cases of high-grade pre-malignant lesions, subject to therapeutics and non-development for cancer (Giranielli, VR, Thuler, LCS & Silva, GA, 2016).

Thus, in order to carry out the early diagnosis effectively, it is necessary to implement organized screening programs, with high effectiveness and the lowest possible cost, which help to reduce the incidence rates and,

consequently, mortality due to CC, considering that the early detection (screening) of cancer in asymptomatic women is the primary initiative to prevent this neoplasm (Ribeiro, JC & Andrade, SR, 2016).

In addition, we have to, one of the various duties of the Basic Health Unit (BHU) is the collection of material for the Pap smear, which should be done routinely, as recommended by the Ministry of Health (MH). However, it is known that many women neglect to collect the exam by taking long intervals without undergoing the test. Thus, a way to get around this situation would be to actively seek women to perform a new CC prevention exam (Corrêa, DAD, Villela, WV & Almeida, AM, 2012).

According to the National Cancer Institute (INCA), this research is justified by the continuous incidence of CC with about 16,590 new cases and 6,526 number of deaths among women affected by this disease. Thus, conducting the study is relevant as it enables the discussion of the theme, allowing the dissemination of information as a resource to expand access to women in search of early diagnosis of CC and provides strengthening of self-care in view of the importance of preventing this pathology (Silva, FCF, et al, 2020).

Thus, the work aimed to report on the experience of developing an innovative tool that facilitated the process of active search for women as an efficacy factor in the screening for cervical neoplasms.

## II. METHOD

This is a descriptive research, of the experience report type, carried out by nursing and medicine students from Public and Private Education institutions, from November 10 to 15, 2019. In this context, the action was carried out in a Basic Health Unit (BHU), in the city of Belém-PA, the target audience being all women who undergo the prevention exam, Pap smear, in the unit.

Thus, in order to develop the innovative active search tool, three moments were necessary: I- Data collection, II- Operative plan and III - Construction of the innovative tool. In addition, after the development of the facilitating instrument, it was necessary to apply it during the preventive exam, where the effectiveness of the technology was consolidated.

In the first moment, a survey of information was carried out on the attendance of women in the territory in search of the Pap smear. Thus, it was noticed that the number of patients was low, so there was a need to circumvent the low adherence to the preventive with the reorganization of the service.

In the second moment, the operational plan was carried out, understood as a way to systematize proposals for

solutions to face the problem in question, where a meeting took place with all the people involved in planning (Nursing and Medical Academics, Responsible Nurse and Community Health Agents - ACS). Thus, the division of responsibilities for each category by operation was defined by consensus and the deadlines for producing the product, having established the creation of a form as a facilitating search tool.

In the third moment, the production of the facilitating tool was elaborated, which consisted of creating a specific form for the Pap smear and grouping each document in an alphabetical file. In this way, each form has the presence of a header (patient's name, date of birth, national health card (CNS), address and telephone number), in addition to, in its body of text, covering areas containing: Date, Cytology, Cervical evaluation and exam result. After the patient has performed the exam, her file is manually filed with the binder according to: alphabetical order and completed or open form.

In this sense, each open form, that is, that has no signature that the patient returned to receive the test result, will be kept in organizing bags so that there is a separation of patients who are up to date with the preventive exam those who need to have a greater assiduity in the collection of Pap smears.

Then, having consolidated the production of the innovative instrument, it was necessary to apply it during the preventive exam. Thus, during that moment, the individual form of each patient was used and later stored in the binder in its respective alphabetical category.

## III. RESULTS AND DISCUSSION

With the development of innovative technology, it was observed that the old tool, the record book, is outdated, due to the fact that it offers a discontinuity of care to women who undergo the exam. Thus, it is noted that the results of each patient are dispersed in a notebook full of confused and disorganized notes.

Mendes FRP, et al (2017), considers that there is continuity of care when these are provided in order to complement each other in an appropriate time. Continuity is understood as the provision of care by different providers in a coherent, logical and timely manner. Also, the continuity of care guarantees an improvement in the quality of care provided, contributes to cost reduction and is considered an appropriate strategy and policy that health services must follow. On the other hand, fragmentation of care can result in confusing treatment guidelines for the user, with great potential for errors and repetitions, insufficient follow-up and insufficient preparation for

health professionals. It is essential to reduce the information asymmetry between users and health care providers and make more information available to users of health services.

Thus, it was found that the use of the new tool, allowed the continuity of care, expressing its significance to positively interfere and thus avoiding late diagnoses and traumatic treatments or even the impossibility of cure.

According to Casarin, MR & Piccoli, JCE (2011), the development of cervical cancer generally occurs slowly and goes through different stages, of which the preclinical stage is detectable and curable. The early detection of lesions in asymptomatic women can be diagnosed in the early stages of the disease. In this way, when precancerous lesions and cervical cancer are detected early, they can respond more effectively to treatment. Early diagnosis helps to improve survival, reduce morbidity and reduce treatment costs. Early diagnosis includes three phases, which are awareness and access to care; clinical evaluation, diagnosis and finally treatment.

It is noteworthy that, the development of this new tool allowed the clarity and agility of monitoring each woman, in view of the way it is organized, allowing to evaluate the evolution of each patient in an individual, equitable and holistic way aiming at the promotion of health and prevention of CC.

In this sense, according to Fonseca ACM, et al (2020), the use of educational technologies is essential, as they are intended to promote teaching activities and mediate educational practices with specific types of users in the community. In addition, the use of technology is an essential way of promoting understanding, providing skills improvements and achieving the benefits that only the educational process can provide. Educational technology aims to educate and stimulate critical thinking so that people can gain autonomy and improve the quality of their health.

Thus, it was found that the form promoted a continuous analysis of each woman, allowing to know exactly the date, month and year of the last preventive exams, as well as the results of them, and from there, determine the frequency of the next exams, facilitating the scheduling of the next preventives and active search of women who are not having Pap smears.

In accordance with Aguilar, RP & Soares, DA (2015), the Papanicolaou gynecological exam is a method to track precancerous lesions of cervical cancer and prevent the tumor itself. It is an efficient and low cost method, considered one of the best methods made available by the public health system for the screening of cervical cancer.

In this sense, Gasperin SI, et al (2011), the following preventive inspections are recommended: The first two inspections must be carried out every one year. If these two tests do not show cervical changes, they must be performed every three years. The preventive treatment for women aged 25 starts and lasts up to 64 years. At least two consecutive negative tests in the past five years will end after that age. In view of these recommendations, Casarin, MR & Piccoli, JCE (2011), understand that it is essential that health services guide women about the content and importance of the exam. It should be noted that its periodic performance can reduce the mortality rate from cervical cancer.

In addition, by creating the form, it was possible to quantify the number of women taking the exam and to know the reasons for not returning to the unit to receive the result. Thus, the explanations given are in relation to working for not being able to seek permission, not having time due to household chores, not having the financial resources to get to the unit and among other reasons. Accordingly, critical and reflective thinking was established about strategies adopted to integrate all women in the search for preventive exam.

In this perspective, INCA (2017), highlights that among all types of cancer, CC is the one with the greatest potential for prevention and cure, reaching almost 100% probability, being able to be diagnosed early and treated on an outpatient basis in about 80% of the cases. The implementation of some strategies is essential to reduce the overall incidence of this cancer where these strategies include prevention, early detection and treatment.

Thus, Almeida PA, et al (2010), states that in order to reverse the high incidence of cervical cancer in women worldwide it is essential that they have access to information information. Therefore, the main prevention strategy is screening, where the pathology detection technique is performed using oncotic cytology, through Pap smear gynecological examination. As well as, the adoption of cytopathological exam quality management strategies, reference services for the diagnosis and treatment of cervical cancer precancerous lesions, improving the management of early detection actions and among other prevention and early diagnosis strategies are essential to reduce the worldwide incidence of pathology.

#### IV. CONCLUSION

The study showed that with organization and dedication, it is possible that the greatest number of women undergo cytopathological examination of the cervix, as an effective method of prevention and early detection of CC. Hence, it is necessary to have the



implementation and use of innovative technologies that facilitate health care and, with that, promote continuous, holistic and equitable care.

In this context, the test for early detection of precancerous lesions is also important to prevent the development of the disease. The Pap test is a simple, low-cost and very effective early detection method if performed and the results analyzed correctly. However, due to several factors, this test does not reach the entire target population. In this sense, it is essential that women are informed about what this exam is and about its importance. Death from cancer of the cervix is often related to late diagnosis of the disease.

In this way, the research enabled a reflection on the strategies used to facilitate women's access to the exam collection, as well as to understand the main factors that interfere in this process. For this, it is important to understand that cervical cancer is a tumor that can be prevented at different stages.

Therefore, it is concluded that it is evident that health professionals are responsible within primary care, as they are able to analyze the difficulties encountered in carrying out the exam and can seek appropriate solutions through a critical-reflexive posture for the search of a more humanized assistance.

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